



## PRODUCT DATASHEET

## LoRaWAN OPEN CLOSE DOOR SENSOR

### OVERVIEW

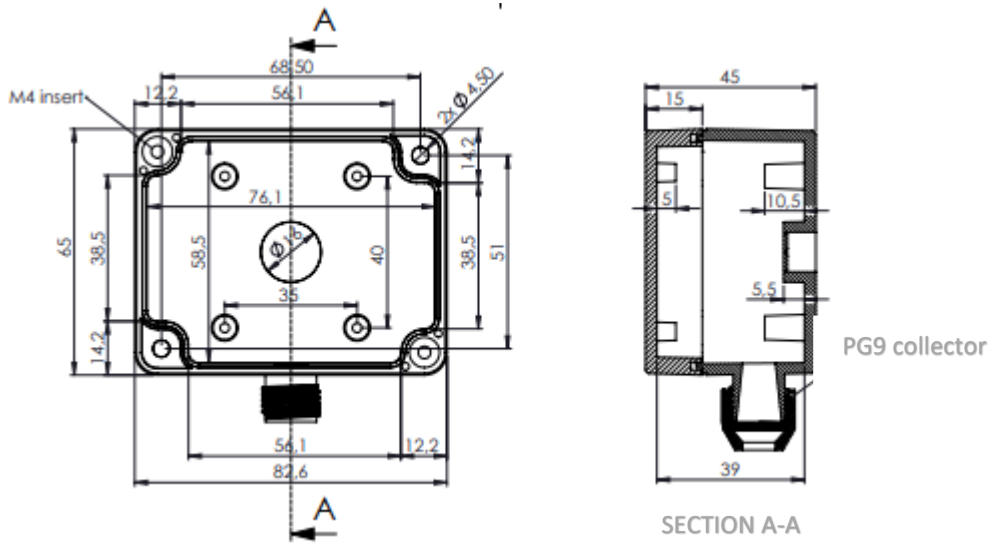
NetOP Open-Close Door sensor is a long- range wireless sensor which can be used for opened/closed applications that provide information on the status of doors, windows, cabinets, etc. so it could be monitored that there is any entrance into security room which is not allowed, or if a door or window has been left open. This sensor is fully compatible with LPWAN technology by using LoRaWAN.



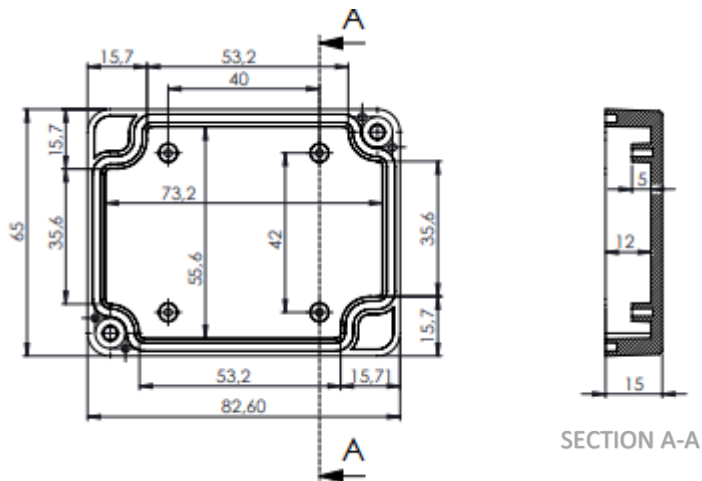
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TECHNICAL DRAWING

Box With Terminal Seal



Cover Page





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## KEY FEATURES

Real Plug & Play

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Easy to mount & install

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Compatible with LoRaWAN™ specification

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Maintenance free

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Secure communication (AES-128)

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Ultra -Low Power Consumption

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Certificate: LoRaWAN™

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## COMMUNICATION SPECS

Compatible with LoRaWAN Specification 1.0.3

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The sensor uses Low Power Wide Area Network-LPWAN technology (LoRa) for connectivity

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Compliant with Low and High Frequencies (AS923, AU915, CN470, CN779, EU433, EU868, IN865, KR920, RU864, US915 MHz ISM bands)

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Supports High power and Low power LoRa RF applications: - Up to +22 dBm at US915 and AU915, - Up to +14 dBm elsewhere

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Ultra -low power consumption. Excellent long-term stability.

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170 dB maximum link budget

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Radio Performance: High RX sensitivity down to -148 dBm

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Full ADR, OTAA and ABP support

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Long range wireless data transmission

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## MECHANICS

Housing: ABS (IP65 or higher)

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Dimensions: 82.5 x 65 x 45 mm

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Operating Temperature: 0°C to 40°C

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## POWER SUPPLY

AA Battery 3.6 V Li-SOCI2-Saft LS 14500

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## INDICATORS

Status LED (on board)

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## OPEN CLOSE DOOR SENSOR SPECIFICATIONS

Output: Opened / Closed

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## CERTIFICATIONS & RELIABILITY

EN 60950-1;2006/A2:2013

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ETSI EN 301 489-17 V3.1.1(2017-02)

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EN 55032:2015

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## LoRaWAN FRAME FORMAT

Standard packet size: 24 Bytes

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00-01-02-03-04-05-06-07-08-09-10-11-12-13-14-15-16-17-18-19-20-21-22-23

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1 byte: Connection Type(1->LoRaWAN)

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## INFORMATION

012345678: Device ID

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|1|: Indicates the type of connection the device uses.

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## LoRaWAN OPEN CLOSE DOOR SENSOR PROTOCOL

01-1B-01-YY-YY-YY-YY-YY-YY-YY-YY-YY-YY-YY-YY-YY-YY-01-2C-25-01-12-BB-BB

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01: Selected Slot (1 byte)

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1B: Open Close Door Sensor Board ID (1 byte)

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01: Door State Close (00: Door State Open) (1 byte)

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YY-YY: Empty Data (14 bytes)

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012C: Sleeping Period 0x012CH -> 300D Seconds (2 bytes)

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25: Payload Counter 0x25H -> 37D (1 byte)

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01: Sensor Message Type Periodic (02->Sensor Message Type Interrupt) (1 byte)

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12: Sensor FW Version (1 byte)

- i.Main Version 1
  - ii.Sub Version 2
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0DEF: 0x0DEFH -> 3567D -> 3567 mV -> 3.567 V (2 bytes)

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## INFORMATION

01: Selected slot.

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1B: This slot determines the sensor type.

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01: Door closed (00 door opened) (1 byte)

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YY-YY: Empty Data (14 bytes)

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012C: Sleep interval along 300S.

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25: Data is live or not. Each measurement is incremented by degree.

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01: When the sensor message 02 comes, it enters the interrupt.

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12: Sensor firmware version 1.2

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0DEF: Outputs the measurement in Volt (3.567V).

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